REMARKS

Reconsideration and allowance of this application are respectively requested. Claims 1-3, 5, 6 and 8-15 have been amended. In particular, claim 1 has been rewritten to substantially recite the elements of original claim 12. New claims 18-20 have been added. Claims 4, 7, 12, 16 and 17 have been canceled. Claims 1-3, 5, 6, 8-11, 13-15 and 18-20 are pending in the application. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein.

Rejection Under 35 U.S.C. § 102(e) - Hiramatsu

Claims 1-3, 5, 8, 9, 11 and 13-15 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Hiramatsu (U.S. Patent Number 6,498,928). The rejection is respectfully traversed.

Regarding amended claim 1, Applicant's claimed invention relates to a CDMA receiver performing a path search by searching with a prescribed timing a delay profile indicating a signal power distribution with respect to delay times of received signals. The receiver comprises a separating means, a detection means, a priority establishing means, and a region designation means. The separating means divides the delay profile into a plurality of regions, based on the delay time, and selects at least one of the regions at the respective timings as a designated object for a signal power detection. The detection means performs a signal power detection within the selected region and determines a signal power distribution condition. The priority establishing means establishes a priority region in response to the signal power distribution condition, and the region designation means designates a region to be selected in the separating means as an object

for the signal power detection so that the higher priority a region possessing, with the higher frequency can be designated.

Applicant respectfully submits that the disclosure of Hiramatsu does not anticipate the claimed invention. Hiramatsu discloses a radio reception apparatus which receives signals from all directions through a plurality of directives. The radio reception apparatus generates a delay profile to each directivity and selects a path having the largest received signal among a plurality of delay profiles generated by suppressing interference signals after thus narrowing down directions. (See Abstract). All signals from directions, except for the direction to which directivity is generated, become interference signals when directivity reception is performed. The interference amount in each directivity is decreased by dispersing the interference signals by providing a plurality of fixed directivities (column 2, lines 22-31). Delay profiles generated for each fixed directivity results in narrowed down directions from which interference signals reach, thus suppressing the interference amount of the interference signals for performing the detection of reception timing or the selection of a path (column 2, lines 32-37). As shown in FIG. 3, signals isolated by every directivity are output to correlators (108-110), respectively (column 3, lines 11-12). The outputs from the correlators (108-110) are output to power detection circuits (111-113) and their power is detected (column 3, lines 27-29). The detection results are output to delay profile generating circuits (114-116) and delay profiles are generated by every directivity (column 3, lines 29-31). A determination circuit (117) receives delay profile information and determines the timing of a peak at which the reception power is largest among respective delay profiles as the reception timing (column 3, lines 31-36). Additionally, at the

same time, a determination circuit (127) determines from a delay profile generated in a delay profile generating circuit (126), the timing of a peak at which the reception power is largest among respective delay profiles as the reception timing (column 3, lines 37-58). See also column 6, lines 46-67.

While Hiramatsu may refer to generating a delay profile by every directivity over all directions, there is no teaching or suggestion of all elements of Applicant's claims. Applicant's claimed invention includes "a separating means, which divides said delay profile into a plurality of regions, based on said delay time, and which selects at least one of said regions at the respective timings as a designated object for a signal power detection" (emphasis added). Hiramatsu does not search a delay profile, wherein the delay profile is divided into a plurality of regions based on delay time, as Applicant claims. Instead, Hiramatsu only discloses generation of delay profiles by every directivity over all directions (column 6, lines 47-48). The delay profiles in Hiramatsu are not searched with a prescribed timing, nor are they divided into a plurality of regions based on delay time, as Applicant claims. Hiramatsu only detects the timing and the direction that the delay profiles become the maximum (column 6, lines 48-53). Furthermore, the delay profiles in Hiramatsu are generated by every directivity in the detection of the reception timing (column 7, lines 17-21). Hiramatsu only discusses spatial diversity with a delay profile by each directivity, but does not at all mention or suggest searching of a delay profile with a prescribed timing, the delay profile being divided into a plurality of regions based on delay time.

Examiner has relied upon column 8, lines 32-34 of Hiramatsu for teaching a separating means which divides a delay profile into a plurality of regions, however, Hiramatsu only discloses the division of space in all directions into a plurality of fixed directivities, which by each a delay profile is generated. Hiramatsu only discusses spatial directions as fixed directivities, and does not teach or suggest a separating means which divides a delay profile into a plurality of regions, based on a delay time.

The claimed invention also includes a detection means which performs a signal power detection within the selected region and determines a signal power distribution condition. Examiner has relied upon column 6, lines 4-23 and column 7, lines 1-26 for this teaching. However, Hiramatsu makes no mention or suggestion of such a signal power detection and determination of a signal power distribution condition. Hiramatsu only discusses a generation of a delay profile by every directivity of a plurality of fixed directivities received by Hiramatsu's device, and of the comparison of the path determined by the determination circuit (117) with the path from the delay profile generating circuit (126) and subsequent changing of path based on the comparison. Hiramatsu also mentions again that a delay profile is generated by every directivity in the detection of the reception timing, which narrows down directions from which interference signals arrive and also suppresses interference amounts of the interference signals for detecting the reception timing. Hiramatsu rapidly performs path search, and by continuing detecting paths from all directions even during communicating, the trace of a path of a desired station can be performed even in the case where the disappearance of arriving signals or the appearance of a new arriving signal happen. However, there is no teaching or suggestion of a

detection means which performs a signal power detection within the selected region and determines a signal power distribution condition, as Applicant claims.

The claimed invention further includes a priority establishing means which establishes a priority of a region in response to the signal power distribution condition. Examiner has relied upon column 3, lines 15-26 for this teaching. However, Hiramatsu only discusses the operation of correlators (108-110) between received and known signals. Hiramatsu's correlation operations are performed such that signals of a broadcasting station with which communication is desired can be extracted. However, there is no teaching or suggestion of a priority establishing means which establishes a priority of a region in response to the power distribution condition, as Applicant claims.

The claimed invention also includes region designation means which designates a region to be selected in the separating means as an object for the signal power detection so that the higher priority a region possessing, with the higher frequency can be designated. Examiner has relied upon column 1, lines 12-21 for this teaching. However, Hiramatsu only discusses general characteristics of a digital radio communication system and presents an adaptive array technique as a measure against selective fading. Therefore, Hiramatsu does not teach or suggest a region designation means which designates a region to be selected in the separating means as an object for the signal power detection so that the higher priority a region possessing, with the higher frequency can be designated, as Applicant claims.

At least by virtue of the aforementioned differences, Applicant's amended claim 1 distinguishes over Hiramatsu. Independent claim 13 is a related method claim, and is allowable

for analogous reasons as discussed above. Claims {2, 3, 5, 8, 9 and 11} and {14 and 15} are dependent claims including all of the elements of independent claims 1 and 13, respectively, which, as established above, distinguish over Hiramatsu. Therefore, claims 2, 3, 5, 8, 9, 11, 14 and 15 are also distinguished over Hiramatsu for at least the aforementioned reasons as well as for their additionally recited features. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) are respectfully requested.

Rejection Under 35 U.S.C. § 103(a) - Hiramatsu in view of Matsuoka et al.

Claims 6 and 10 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hiramatsu in view of Matsuoka et al. (U.S. Patent Number 6,771,988; hereinafter "Matsuoka"). The rejection is respectfully traversed.

As discussed above, Hiramatsu does not teach or suggest every feature of Applicant's claimed invention. In particular, Hiramatsu does not teach or suggest a receiver including a separating means, a detection means, a priority establishing means, and a region designation means, as claimed. Matsuoka does not remedy the deficiencies of Hiramatsu. Matsuoka discloses a radio communication apparatus which estimates delay profiles representing arrival times of a desired wave and delay waves for each received signal from directional antennas. (See Abstract). Matsuoka's FIG. 2 shows that a delay profile is estimated for each received signal from the antennas (10-1 to 10-N) (column 39-43). An arrival angle range of the desired wave may be estimated from the estimated delay profiles (column 4, lines 43-45). However, there is also no mention or suggestion in Matsuoka of a separating means which divides a delay profile into a plurality of regions, with characteristics as Applicant claims. Matsuoka also does

not teach or suggest a detection means which performs a signal power detection within the selected region and determines a signal power distribution condition, a priority establishing means, or a region designation means as Applicant also claims. At least by virtue of the aforementioned differences, Applicant's claims 6 and 10, which are dependent claims including all of the elements of independent claim 1, distinguish over Hiramatsu in view of Matsuoka. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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23373
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Date: July 5, 2005